What is claimed is:

1. A method for processing a digital image comprising:

generating a set of subpixel data values as function of pixel data of a digital image;

mapping each of the subpixel data values to a new subpixel data value; and

adjusting the pixel data of the digital image according to the new subpixel data values.

2. The method of claim 1, wherein mapping the subpixel data includes processing each of the subpixel data values with a lookup table to generate the new subpixel data values.

3. The method of claim 2, wherein processing each of the subpixel data values with the lookup table includes interpolating between elements of the lookup table according to a fractional component of the subpixel data value.

4. The method of claim 2, wherein the lookup table stores a plurality of addressable replacement values, wherein each replacement value includes an integer component and a fractional component.

5. The method of claim 1, wherein mapping the subpixel data values includes mapping the subpixel data values according to a user-defined curve for shaping the digital image.

6. The method of claim 1 and further including applying an image processing operation to the new subpixel data.

7. The method of claim 6, wherein the image processing operation is a shading operation.

8. The method of claim 6, wherein applying the image processing operation includes iteratively processing the new subpixel data values.

9. The method of claim 1, wherein the set of subpixel data values are generated using pixel data produced by an image processing operation, wherein the pixel data has an integer component and a fractional component.

10. The method of claim 1, wherein generating a set of subpixel data values includes generating at least one two-dimensional array of subpixel data values.

11. The method of claim 10, wherein generating at least one two-dimensional array includes generating an array having three columns and three rows.

12. The method of claim 10, wherein generating at least one two-dimensional array includes generating a plurality of subpixel arrays for each pixel and adjacent pixels of the digital image.

13. The method of claim 1, wherein generating a set of subpixel data values includes:

generating a plurality of sets of subpixel data values;

selecting one new subpixel data value from each set and applying an image-processing operation to the selected new subpixel data values; and

repeating iteratively the selection of the new subpixel data values from the sets and the application of the image-processing operation until all of the new subpixel data values have been processed.

14. The method of claim 1, wherein adjusting pixel data of the digital image includes updating the pixel data with an average of the new subpixel data values.

15. The method of claim 1, wherein the average of the new subpixel data values is a weighted average.

16. The method of claim1, and further including examining the pixel data values to determine whether to generate subpixel data values for a corresponding pixel data value.

17. The method of claim 1, wherein adjusting pixel data of the digital image includes updating the pixel data with an integer value calculate from the new subpixel data values.

18. The method of claim 1, wherein the digital image is a digital matte and the method reduces aliasing artifacts when shaping the digital matte by generating the set of subpixel data values as an array of subpixel data and mapping the subpixel data values to the new subpixel data values by interpolating between elements of a lookup table representing a user-defined curve.

19. A computer program product, tangibly stored on a computer-readable medium, for processing a digital image, the product comprising instructions operable to cause a programmable processor to:

generate a set of subpixel data values as function of pixel data of a digital image;

map each of the subpixel data values to a new subpixel data value; and

adjust the pixel data of the digital image according to the new subpixel data values.

20. The computer program product of claim 19, wherein the programmable processor maps the subpixel data values to new subpixel data values by processing each of the subpixel data values with a lookup table representing a user-defined curve.

21. The computer program product of claim 20, wherein the programmable processor processes each of the subpixel data values with the lookup table by interpolating between elements of the lookup table according to a fractional component of the subpixel data value.

22. The computer program product of claim 19 and further including instructions to cause the programmable processor to apply an image processing operation to the new subpixel data.

23. The computer program product of claim 22, wherein the programmable processor iteratively applies the image processing operation to the new subpixel data values.

24. The computer program product of claim 19, wherein the programmable processor generates the set of subpixel data values by:

generating a plurality of sets of subpixel data values;

selecting one new subpixel data value from each set and applying an image-processing operation to the selected new subpixel data values; and

repeating iteratively the selection of the new subpixel data values from the sets and the application of the image-processing operation until all of the new subpixel data values have been processed.

25. The computer program product of claim 19, wherein the programmable processor reduces aliasing artifacts in the digital image by generating the set of subpixel data values as an array of subpixel data and mapping the subpixel data values to the new subpixel data values by interpolating between elements of a lookup table representing a user-defined curve.

26. A system comprising

an operating environment provided by a computer; and

a computer program executing within the operating environment to reduce aliasing artifacts when shaping a digital image, wherein the computer program generate a set of subpixel data values as function of pixel data of a digital image, and further wherein the computer program shapes the digital image by mapping each of the subpixel data values to a new subpixel data value and adjust the pixel data of the digital image according to the new subpixel data values.

27. The system of claim 26, wherein the computer program maps the subpixel data values to new subpixel data values by processing each of the subpixel data values with a lookup table representing a user-defined curve.

28. The system of claim 27, wherein the computer program processes each of the subpixel data values with the lookup table by interpolating between elements of the lookup table according to a fractional component of the subpixel data value.

29. The system of claim 26, wherein the computer program applies an image processing operation to the new subpixel data.

30. The system of claim 26, wherein the digital image is a digital matte.

31. A method of creating an image-based effect from a digital matte, comprising:

generating a digital matte from an image;

blurring the digital matte;

shaping the blurred matte using a predefined shaping transformation; and

using the shaped blurred matte to create the effect.

32. The method of claim 31, wherein:

blurring the digital matte comprises generating high-resolution values for the pixels of the blurred matte, high-resolution values being values having a fractional component;

shaping the blurred matte comprises transforming a region of interest of the matte pixels from original values to new values by:

forming a subpixel patch for each matte pixel to create subpixels for each matte pixel;

applying the shaping transformation to each of the subpixels created for each matte pixel; and

calculating a new value for each matte pixel in the region from the transformed values of the corresponding subpixels.

33. The method of claim 32, wherein:

using the matte comprises applying an image processing operating to the subpixels of the region after applying the shaping transformation and before calculating new values for matte pixels.

34. The method of claim 33, wherein:

the high-resolution values are an 8.8 result for each pixel of the blurred matte;

the subpixel patch a particular pixel is a 3x3 patch composed of bilinearly interpolated values calculated from values of pixels neighboring the particular pixel; and

the new values are calculated as an unweighted average of the values of the corresponding subpixels after the shaping transformation has been applied.

35. The method of claim 31, wherein:

the predefined shaping transformation is implemented by a lookup table; and

the act of shaping the blurred matte is performed by applying the lookup table to the blurred matte.

36. The method of claim 31, wherein:

the predefined shaping transformation is defined by a user interacting with a graphical user interface to specify a curve defining the transformation.

37. The method of claim 31, wherein:

the digital matte is small.